WORKING PAPERS FOR THE LANGUAGE VARIATION

AND LIMITS TO COMMUNICATION PROJECT

Number 2

A VOCABULARY OF BILIAU, AN AUSTRONESIAN LANGUAGE OF NEW GUINEA, WITH NOTES ON ITS DEVELOPMENT FROM PROTO OCEANIC

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Cornell University
and
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0. INTRODUCTION

The present vocabulary is of the language spoken in Biliau village on the Rai Coast of the Madang Province, Papua New Guinea. It is located at approximately 5° 35' S and 146° 20' E. Z'graggen (1975) gives the name Biliau to the whole language group which consists of eight villages: Biliau, Teterei, Yamai, Galek, Suit, Malangai, Wiwai, and Yori. Very little has been published on the Biliau language. Only two works give any language data. The Gedaged-English Dictionary by J. Mager (1952) cites some forms from the Biliau language for the purpose of comparison, mainly from the Suit village. Peter Lincoln (1976) has recently conducted a survey of the Rai Coast Austronesian languages. His comparative wordlist and grammatical material include data from Galek village.

The first section of this paper contains brief notes on the phonology. Sections two through four are the vocabulary, consisting of an introduction to the vocabulary, a Biliau-English vocabulary, and an English-Biliau vocabulary. The final section treats the possible historical sources for 150 of the vocabulary items and posits the sound changes by which the present day Biliau vocabulary developed from its Proto Oceanic ancestor language.

In the remainder of the paper, any reference to Biliau refers to the language spoken in Biliau village, not to the language group as a whole. The language group is by no means homogeneous; each village has its own communalect. Lexicostatistically there is an eighteen per cent difference on the Swadesh 100-word list between the two extreme ends of the language group, Biliau and Suit. Thus it is difficult to speak of the Biliau language as a whole. The data presented here represent only the language as spoken in the village of Biliau. See Simons (1977a) for a detailed treatment of some of the dialect differences between the villages.

The data presented here are a result of six weeks field work in Biliau village during September and October of 1976. The study was carried out in conjunction with the Summer Institute of Linguistics and the Cornell University research project, "Language Variation and Limits to Communication" which is being partially supported by the National Science Foundation grant BNS76-06031.

A portable microcomputer, the ETP 8L, was used in the field to maintain the vocabulary list. The computer was used to keep a sorted master list of Biliau to English vocabulary, and then reverse the file to English-Biliau order and re-sort. The programs used to maintain the vocabulary file are explained in Simons 1977b. The computer was also used in the analysis of the sound changes from Proto Oceanic to present day Biliau. Programs were written to compile a list of all the sound correspondences that occur in a list of paired parent and daughter forms, count the number of occurrences of each correspondence, extract all the examples of the correspondences, and mark the word pairs as to the number of established correspondences they contain.

1. NOTES ON THE PHONOLOGY

1.1 Phonemes

The following 22 phonemes occur in the Biliau language.

Consonants

	labial	alveolar	velar
stops			
voiceless	p	t	k
voiced	b	d	g
fricatives			
voiceless	f	s	
voiced		z	
lateral			
voiced liquid		l	
retroflexed			
voiced flap		r	
nasals	m	n	ng (ŋ)
semivowels	w	y	

Vowels

	front	central	back
high	i		u
mid	e		o
low		a	
		aa	

Of the above phonemes only /y/, /w/, and /aa/ deserve comment. The syllable final /y/ and /w/ are a result of interpreting [i] and [u] as consonants when they occur in the following glides: [ai, ei, or, ui, au, eu, ou, iu]. This decision was made for several reasons. First of all, a CVVC syllable never occurs; that is, a glide always ends a syllable and a syllable final consonant never follows a glide. Secondly, before the interpretation of syllable final [i] and [u] as /y/ and /w/, C_2 in a C_1VC_2 syllable was any consonant phone except [y] or [w]. Thirdly, in a CV_1V_2 syllable, V_2 could only be [i] or [u]. Thus we interpret [i] and [u] as the consonants /y/ and /w/ when they occur as the second element of a glide. This reduces the number of syllable shapes that occur and removes the occurrence restriction on C_2.

The /aa/ phoneme is phonetically [aʔa]--two a vocoids separated by a lenis glottal stop. This glottal occurs nowhere else in the language. The double a has been interpreted as a single phoneme because it functions in every way just like the five single vowels, and has no unique occurrence or co-occurrence restrictions. The fact that it is a different phoneme from /a/ is attested by the following minimal pairs:

/wag/	'canoe'
/waag/	'drum'
/sam/	'canoe outrigger'
/saam/	'sky'
/mam/	'father'
/maam/	'a species of fish'

1.2 Phoneme distribution restrictions

All consonants occur in any C slot anywhere in the word. The only consonant restriction is in the following word shape

$$(C)VC_1C_2V(C)$$

where both C_1 abd C_2 cannot be stops. There are two exceptions to this. The first is in the case of a word which is a reduplicated stem.

/gubgub/	'ditch'
/pidpid/	'bottle'

The other case is when a verb has undergone the process of vowel syncope. That is, when a prefix is added to a two syllable verb stem, the first vowel of the stem drops.

/badi/	'he gets up'
/dibdi/	'they get up'

The sequence /n/ followed by /g/ never occurs. Thus the digraph ng unambiguously represents the velar nasal (ŋ).

All vowels occur in initial and medial position in the word. Only /i/ and /u/ occur word finally.

1.3 Syllable shapes

The following syllable shapes occur:

V
VC
CV
CVC

V syllables occur only as the first syllable of a word.

/u.dud/	'dolphin'
/a.kung/	'clam'

VC syllables occur only following /i/ or /u/, or as a single word.

/ki.el/	'sail'
/mu.at/	'snake'
/az/	'sun'

CV syllables occur as a single word and as any syllable in a word.

/fu/	'he coughs'
/ta.mol/	'man'
/lab.ni/	'leaf'

CVC syllables occur as a single word and as any syllable in a word.

/bing/	'talk'
/lab.ni/	'leaf'
/u.dud/	'dolphin'

Any Biliau word can be syllabified by applying the three unordered rules:

VV → V.V
CC → C.C
VCV → V.CV

2. INTRODUCTION TO THE VOCABULARY

Conventions used in presenting the vocabulary are discussed in sections one through five. Section six discusses the reliability of the data.

(1) Noun and verb glosses - Verbs are glossed with the infinitive form of the English word and nouns are glossed with the simple noun form. The ambiguity inherent in many English words which can be either noun or verb is taken care of in this way. Thus, guab 'fly' is a noun and roy 'to fly' is a verb.

(2) Inalienably possessed nouns - Nouns which are inalienably possessed have a hyphen following the stem. The possessive suffixes are:

	singular	plural
1st person	-w	-mam (exclusive) -d (inclusive)
2nd person	-m	-mim
3rd person	-y	-z

(3) Abbreviations - The following abbreviations are used: lit. 'literally'; pl. 'plural'; TP. 'Tok Pisin, New Guinea Pidgin'; sp. 'a particular species of'; spp. 'a number of species of'.

(4) Plants and animals - A simple English gloss is given if the Biliau word is a generic term. If it is the name for a particular unidentified species, the abbreviation 'sp.' enclosed in parentheses follows the gloss. Thus, yi 'fish' is the generic term for fish, and aziw 'fish (sp.)' is a particular unidentified species of fish. For all the plant names the Linnaean genus and species designations are given as well as the Tok Pisin term when it was considered helpful. Mihalic (1971) was the standard reference for both Linnaean and Tok Pisin terms. At the end of the English to Biliau vocabulary, a list of all the plant names in the order of their Linnaean designations is given. This is done since many of the plants have no common English name.

(5) Alphabetization - The normal English alphabetical order is used for the Biliau to English vocabulary with only one exception. The ng digraph which represents the velar nasal phoneme is treated as a single character which follows n in the alphabet. Thus, ng follows ni, no, nt, nz, etc.

(6) Reliability - All of the Biliau words were double checked with native speakers to verify the spellings. Meanings, however, were not checked thoroughly for all words. There are three areas where more consistency checking would be helpful. (a) In non-careful speech, the /aa/ is very often pronounced like /a/. Thus some of the /a/'s in the vocabulary list may be /aa/'s and vice versa. (b) We often had difficulty hearing the difference between word final /i/ and /ey/. (c) We are not sure that all of the inalienably possessed nouns have been correctly identified, and conversely, some nouns which were identified as such may not actually be.

Reduplication is a very widespread phenomenon in the Biliau language, apparently affecting all word classes. Nearly any verb stem can be reduplicated to indicate process or continuation. Noun stems are reduplicated to show diminution or abundance, eg. muat 'snake' and mutmuat 'worm'. Many noun stems are reduplicated with no apparent semantic significance, eg. pidpid 'bottle', fumfom 'wooden floor', gubgub 'ditch'. Adjectives are apparently reduplicated to show that they are describing a number of things, eg. nalu 'small' and nalalu 'small (pl.)', kamtey 'unripe' and kamtatey 'unripe (pl.)'. There are at least two morphophonemic processes associated with reduplication, a weakening of the vowel in the penultimate syllable (eg. mutmuat 'worm', fumfom 'wooden floor', and mitmet 'shell (sp.)') and a creeping /a/ (eg. nalu and nalalu 'small'). Time did not permit a thorough investigation of the meanings and process of reduplication. This incomplete understanding of reduplication has no doubt led to some inaccuracies in the vocabulary list. Only the unreduplicated form of verb stems is given.

3. BILIAU TO ENGLISH VOCABULARY

aang	to eat food that is not meat (see <u>anging</u>)
aay	tree, firewood
aay dimi	stick, lit. 'arm of tree'
aay labni	green, lit. 'leaf of tree'
aay suru	sap, lit. 'blood of tree'
aay warey	root of tree, lit. 'rope/vine of tree'
ab	house
abang	everything
abatut	to plant
adangdangey	cold
agaru-	neck
ager	enemy
agum	middle
akung	clam
alal	soot
am	who
amag	fish net
an	you pl.
anangey	meat of something, food of something
anangey	peak of roof
ananas	pineapple
ananu-	shadow, picture, spirit
anar	to decorate
aning	banana
aniaw	rain
antam	you two
angaar	tree with edible nut, the Tahitian chestnut, <u>Canarium polyphyllum</u>, TP. <u>galip</u>
anging	food (not including meat)
angru	half
aror	net bag
arwaw	afternoon
asarur	to bleed
asur	blood
ate- bibi	palm of hand, palm
aw	lime chewed with betel nut
awa-	mouth, opening
awul	hook
ayyang	manioc, cassava, <u>Manihot utilissima</u>
az	sun
aziw	fish (sp.)

baal	dove, large and black
babley	a light; to light, to shine, to ignite
bad	one (indefinite)
badey	to stay, to remain, to be
badi	to stand up, to arise
bading	to throw away
balag	nothing
balbad	half
bale-	tongue
barnaam	sand
basadangi	straight
basul	to turn
batu	egg, fruit
bayariar	millipede
bazbazey	eyelash
bazez	shell
bazi	feather, wing
bey	first
bibi	green coconut too young to drink
bidaag	bedbug
bidbidi	wet
bililierngi	round
bimi	ripe
bininaar	hibiscus shrub, <u>Hibiscus rosa-sinensis</u>
bing	talk, speech
bingat	variety of yam, <u>Dioscorea esculenta</u>, TP. <u>mami</u>
biraaw	crazy
bisey	cord
biso-	navel
bog	sea hawk
bom	sago palm, <u>Metroxylon</u> sp.
bongsag	morning, tomorrow
buaad	saucepan
buaay	star
buaw	bamboo
bubuab	to cry (of animals)
bubulu	body hair
buor	pig
buot	to bury
burburar	reef
but	white dove
buz	urine; to urinate

daang	to look, to see
dabi	pit of fruit
dag	to avoid
dag	to finish
dagdago-	shoulder
dagebi	tree kangaroo
daging	knot
daglaa-	thigh
dagor	to wash something
daleb	year; old garden
dame-	shin
damo-	forehead
dangdang	to search for
darey	red
daseg	one
dawdaw	wind from the west
der	wind from mainland
dieb	fish (sp.)
dima-	arm, hand
dima- gungguang	elbow
dima- tini	thumb, lit. 'mother of hand'
dimad bad	five, lit. 'one hand'
dimad ru	ten, lit. 'two hands'
dimad zizili bad	six, lit. 'a hand and one finger'
dimad zizili ru	seven, lit. 'a hand and two fingers'
dimad zizili tol	eight, lit. 'a hand and three fingers'
dimad zizili waalbad	nine, lit. 'a hand and four fingers'
diwdiw	beetle (sp.)
dog	to remove coconut from shell
dom	spikes which hold outrigger boom
dos	to sit down
doy	tree, leaves used as native paper, _Hibiscus tileaceus_
duaan	bow; war
dugdug	bush
duguaay	to jump
dupuroy	to fight
eb	string made from _rey_ grass
ebisi	affine
esey	expression of delight
ew	native beer
ey	hey!

faat	to float
fagey	eyebrow
fang	traditional carpenter's plane
fangayan	on top of
far	frog
fari-	lip
fay	to carry in a net bag
fof	to break against the grain
fon	sea turtle
fow	new
foy	to break
foy	a paddle; to paddle
foy tini	rudder, lit. 'mother of paddles'
fu	base; origin
fu	a cough; to cough
fuf	old (of persons)
fuf tamol	grandfather, grandson, lit. 'old man'
fufen	grandmother, granddaughter, lit. <u>fuf</u> + <u>pen</u> 'old woman'
fumfom	floor made from wood
funfun	husk of a coconut
fung	to hit, to kill
fungung	roof
fungul	betel pepper, <u>Piper betle</u>
furfor	short grass
furungfurur	to come up again
fut	to make, to build
gaag	taboo
gab	to gather
gabaro-	gums (of mouth)
gabey	bald
gabeyan	above
gabor	fog, mist
gagow	strong
galmi	unripe
gamey	now
gamney	down
gamni-	intestines
gan	where
gar	to eat meat, to bite
gargar	trochus shell
garung	animal; meat
garuy	crab

gaw	crayfish
gawgaw	lung
ge-	saliva
ge	to spit
gelelawey	gill
ger	wall
gilaaz	grass used for making brooms
gilbaan	fish (sp.)
giley	post of house
gim	to buy
gimgim	dirt
gingging	land hawk
giram	bell; slit gong
giren	oil, grease
girey	odor
gon	dog
goy	wild
guab	fly
guam	shell (sp.), TP. gam
gubgub	ditch
gugor	finger, toe
gun	to be standing up
guong	grasshopper
gus	bamboo (sp.)
gusgus	windpipe
ingo-	tooth
ilian	inside of
iloz	belly; seat of emotions
in	he, she, it; they
intam	they two
ip	tree with edible fruit, Inocarpus fagiferus, TP. aila
irir	liver
kaang	gourd used for storing water
kaaw	to cover up
kabaal	bush; inland
kafurbad	full
kak	elder sibling
kakarek	chicken
kalbangbang	butterfly
kalmang	shrub used for decoration, Taetsia fructicosa, TP. tanget
kalwit	to catch
kam	to peel

kamdud bee (sp.)
kamsarsir grass
kamtatey white (pl.); unripe (pl.)
kamtey white; unripe; white man
kanay seagull
kankan to think
karangrong ant (sp.)

karag wind from the east
karfey fingernail, toenail, claw
kas to speak, to tell a story
kataa- hair of the head
kawang fence
kidingdengi crooked
kiel sail

kilow tree used for flooring, mats, bow; *Areca* spp., TP. *limbum*
kiming traditional bread
kimpaak pandanus (sp.)
kimpi- skin; bark
kin lightning
kit brain
kiwaar cassowary

kongkong small bamboo gong
kop to cut
kot stomach
kubol handcrafts
kud to carry on head
kukow dust
laaw rafter

laaz branching coral
labni leaf
lal to swell up
lang shore
las skull; shell of coconut
leng many
leng mat very many

ley ginger
lib hole
lingen glass; reflection
lon fat
lu to vomit
lumum citrus
lung to drink
luong to hear, to know

maam	fish (sp.)
maan	bird
maas	sea, saltwater
maat	to die
magager	bee (sp.)
magagwaaw	pain
magarew	hot embers
magarngeng	to finish, to complete
magi	beetle grup
makay	boy
mal	loincloth
malaa-	eye
malbong	flying fox
maley bad	some, few
maley bazi	bamboo (sp.)
maluy	duck
malwey	long
mam	father (term of address)
mam	we (exclusive)
mamsas	dry
mamtam	we two (exclusive)
marwi	heavy
masanggam	python
mataley	flat
matey	old (of things)
matiaw	stone
matul	coral
maw	taro, <u>Colocasia</u> sp.
mayaay	sick
mayal	pronged spear
midili	short
miningi	crackle of fire
mirian	in back of, behind
mitmet	shell (sp.)
mizi	meat
mizirin	bamboo (sp.)
mol	to fall down
mom	land crab
mom	to fish with a hook
mot	island
muat	snake
mug	before

mugangay	before
mugu	arm; trunk of tree
mugur	to shout
munmun	a sore
murgam	later
murot	sago roof thatch
mutmuat	small worms in rotten fruit (see muat)
mutmut	rubbish
muzu- tuy	back of neck
muzu-	wrist
nag	directional marker, away from speaker
nal	day
nalalu	small (pl.)
nalnaal	always
nalu	small (sg.)
nam	I
nan	there, near the hearer
nang	that, near the hearer
nareng	shrub used for decoration, Codiaeum variegatum, TP. purpur
narnarong	color
naw	to scrape coconuts
nay	to cook in a pan
neysong	another
ningi	good
niad	outrigger boom
nieg	directional marker, toward the speaker
niek	child
nimanay	when
nimnem	how much
nin	here, near the speaker
nin	mother (term of address)
ning	this, near the speaker
niw	coconut palm and fruit, Cocos nucifera
no-	face
nog	over there, away from the speaker and the hearer
non	to cook in fire, to roast
noran	yesterday
noy	to rub
nung	that over there, away from both speaker and hearer
ngaad	stone axe
ngew	bandicoot
ngilngili	black

ngilang	angry
nging	mosquito
ngingi	bee
ngingri	tail (not of a bird)
ngizngiz	shell of a nut used for decoration
ngot	to swallow
ngurngur	a cough
olu	pumpkin, squash
os	smoke, cigarrette, tobacco
ot	decorations for dances
ow	vine (sp.)
ozizi	dorsal fin of fish
padaw	pandanus (sp.)
pagar	female (of animals)
paida-	first finger
palaf	bush rat
palangis	axe
palul	to run
pan	to shoot with a bow
paparuman	underneath
par	to walk
pariw	lizard
paypay	papaya
pedipedi	a fan
pen	woman
pidpid	bottle
pip	to carry on the back
pir	to weave, to plait
pisaw fang	adze
ponggi	toy top
pus	to come up, to grow
raag	ribs
raan	water, river
raan kulot	lake
ranraan	tide
ranwayway	dragonfly
rar	clay
raw	to get (plural object)
raw	tree with edible fruit, New Guinea walnut, _Dracantomelon mangiferum_, TP. _mon_
ray	to pull, to tighten
rey	tall grass, _Imperata arundinacea_, TP. _kunai_
ror	large red ant

rosi	bat (sp.)
roy	to fly
ru	two
rub	to go away, to run away, to leave
rur	brown
saab	rubber tree, <u>Fikus elastica</u>
saam	sky
sab	to carve
sabal baley	thin
sag	arrow for shooting pigs
sag	only
sag	to tie
sagara-	back
sak	to scratch
salu	a hoe
sam	to miss the mark
sam	outrigger
samang	what
sami	to smell
saner	rattan, <u>Calamus</u> sp.
sanrer	a scratch
sang mini	why
sar	to comb
sar	to dig
sar	white
sareng	basket made of coconut fronds
sarey	a comb
saring	place name, a local section
sarir	to descend
sarum	clam
sasali-	armpit
saweng	hornbill
sawlaley	light in weight
sebananing	earthquake
si	to come
si	fork
sib	to sew
sibi	very, really
sigang	knuckle
silaay	bamboo (sp.)
silaay	knife
silsili	happy

sinunuy	vein, artery
singe- an	close to, near
singi	skin, shell of something
singpal	to divide
singri	snout of pig, beak of bird
sipi	thorn
sisi	to tear
siw	prawn
siwsiw	angular, buxom
song	to chew betel nut
songgay	far away
songpal	to split with the grain
soy	to shoot with a spear
sug	to bathe
suk	to push
sul	torch
sur	soup
susiw	cockroach
susum	to back up
suy	breast
suy	to make a net bag
taaf	to throw
taang	to cry
taaw	to tie
tab	mat
tabanaa-	head
tabud	moon
tali	tree with edible nut, _Terminalia catappa_, TP. _talis_
talngaa-	ear
tam	and (conjoins two nouns); two (pronoun)
tam-	father (term of reference)
tamol	man
tan	to bury
tan	earth, ground
tan tuy	bush spirit, lit. 'bones of the ground'
tangaw sumum	deaf
tar	to boil
tawaa-	sibling
tay	excrement
te-	younger sibling
ter	fish basket
tes	to leave behind

tet	village
tey sipi	tail of a bird (possibly tay 'excrement' + sipi 'thorn')
tey	to put
teyan	on the other side of
ti-	buttocks
tiaam	no; negative marker, not
tiet	stairs
tiey	to build
tifiri	to turn
timtimeng	salt
tin-	mother (term of reference)
tini-	body, skin
tol	three
ton	spirits of the ancestors
tor	conch shell
tow	sugar cane
tung	arrow, spear
tung	to burn
tup	ashes
tursi	relative on mother's side
turu-	knee
tutu-	bone
tuy	bone
tuy	to hold one thing in the hand
tuytuy	spear with wire prongs; nail
ubu	Sunday
udi	all
udom	night
udud	backbone
udud	dolphin
ul	leech
um	garden
un	breadfruit tree and fruit, Artocarpus incisa
un	you sg.
uot	to do, to make
ur	steam
urat	work
urit	octopus
ururor	gravel
ut	louse
uye-	leg

uyu-	nose
uyu	mountain
uyuy	mouse
uz	to swim
uzar	dawn
waag	to call, to shout
waag	hand drum
waal	betel nut, large red variety, <u>Areca</u> sp.
waalbad	four
waam	dry
waas	plant with edible leaves, <u>Abelmoschus</u> <u>manihot</u>, TP. <u>aibika</u>
wab	to get
waday	pandanus (sp.)
wadiw	eel
waf	termite
wag	canoe
waganamu	large black seagull, lit. 'picture/shadow of a canoe'
wagwag	giant clam
wal	go
wan	right hand side
wanwaney	hot
wangey	big
wanggaay	crocodile
wap	callophyllum tree, <u>Callophyllum</u> <u>inophyllum</u>
war	vine
waray	shark
warinan	day before yesterday; day after tomorrow
warmaan	vine used to poison fish
wawar	to carry
wawwaw	name
wayway	mango tree and fruit, <u>Mangifera</u> <u>indica</u>
wayway dabi	sand fish, lit. 'pit of mango' because the fish eats the mango pits that have been thrown into the sea
wey	friend
-wi	instrument marker
wil	yam, <u>Dioscorea</u> spp.
witan	outside of
wiw	to dream
wod	plate
wol	bow string
wom	to hide
wum	heated stones for cooking
yaang	wind

yaangtey	cloud
yaaw	fire
yam	door
yamer	cloth, clothing
yanyanang	yellow
yasung	tree with edible leaves, _Gnetum_ _gnemon_, TP. _tulip_
yaw	string
yawarti	wind from the sea
yaye-	chin, jaw
yed	we inclusive
yedtam	we two inclusive
yen	to sleep, to lie down
yes	to fill up
yes	spoon
yezyezang	blue
yi	fish
ying	to dance
yok	to pour out
yong	shade
yow	yes
yu	to blow
yu-	husband
zaay	left hand side
zag	to help
zagarib	broom
zal	road, path
zamom	rotten
zamung	bad
zawwaw	betel nut and palm, _Areca_ _catechu_
zer	grass skirt
zingzeng	crab (sp.)
zir	albino
ziri	scales of a fish
ziw	to laugh
zizili	little finger
zom	to carry many things in the hands
zong	boar's tusk

4. ENGLISH TO BILIAU VOCABULARY

above	gabeyan
adze	pisaw fang
affine	ebisi
afternoon	arwaw
albino	zir
all	udi
always	nalnaal
ancestral spirits	ton
and	tam
angry	ngilang
angular	siwsiw
animal	garung
another	neysong
ant	karangrong
ant, large red	ror
arise	badi
arm	dima-
arm	dima- mugu
armpit	sasali-
arrow	tung
arrow for shooting pigs	sag
artery	sinumuy
ashes	tup
axe	palanggis
axe, stone	ngaad
to avoid	dag
back	sagara-
back of, in	mirian
to back up	susum
backbone	udud
bad	zamung
bag, net	aror
bald	gabey
bamboo	buaw
bamboo (sp.)	gus
bamboo (sp.)	maley bazi
bamboo (sp.)	mizirin
bamboo (sp.)	silaay
banana	aning
bandicoot	ngew
bark	kimpi-
base	fu
basket made of coconut fronds	sareng
bat (sp.)	rosi
to bathe	sug
to be	badey
beak of bird	singri
beard	zizi-
bee	ngingi
bee (sp.)	kamdud
bee (sp.)	magager
beer, native	ew
beetle (sp.)	diwdiw
beetle grub	magi
before	mug
before	mugangay
behind	mirian
bell	giram
belly	iloz
betel nut	zawwaw
betel nut, large, red	waal
to chew betel	song
betel pepper	fungul
big	wangey
bird	maan
to bite	gar
black	ngilngili
to bleed	asarur
blood	asur
to blow	yu

blue	yezyezang
body	tini-
to boil	tar
bone	tutu-
bone	tuy
bottle	pidpid
bow	duaan
bow string	wol
boy	makay
brain	kit
bread	kiming
breadfruit	un
to break	foy
to break against the grain	fof
breast	suy
broom	zagarib
brown	rur
to build	fut
to build	tiey
to burn	tung
to bury	buot
to bury	tan
bush	dugdug
bush	kabaal
butterfly	kalbangbang
buttocks	ti-
buxom	siwsiw
to buy	gim
to call	waag
canoe	wag
to carry	wawar
to carry in a net bag	fay
to carry many things in hand	zom
to carry on head	kud
to carry on back	pip
to carve	sab
cassava	ayyang
cassowary	kiwaar
to catch	kalwit
chest	ate- bibi
to chew betel	song
chicken	kakarek

child	niek
chin	yaye-
cigarette	os
citrus	lumun
clam	akung
clam	sarum
clam, giant	wagwag
claw	karfey
clay	rar
close to	singe- an
cloth	yamer
clothing	yamer
cloud	yaangtey
cockroach	susiw
coconut	niw
coconut, too young to drink	bibi
cold	adangdangey
color	narnarong
a comb	sarey
to comb	sar
to come	si
to come up	pus
to come up again	furungfurur
completed	magarngeng
conch shell	tor
to cook in fire	non
to cook in pan	nay
coral, branching	laaz
coral	matul
cord	bisey
a cough	ngurngor
to cough	fu
to cover up	kaaw
crab	garuy
crab (sp.)	zingzeng
crab, ground	mom
crackle of fire	miningi
crayfish	gaw
crazy	biraaw
crocodile	wanggaay
crooked	kidingdengi
to cry	taang

to cry (animal)	bubuab
to cut	kop
to dance	ying
dawn	uzar
day	nal
day after tomorrow	warinan
day before yesterday	warinan
deaf	tangaw sumum
to decorate	anar
decorations for dances	ot
delight, expression of	esey
to descend	sarir
to die	maat
to dig	sar
directional marker, away from speaker	nag
directional marker, toward speaker	nieg
dirt	gimgim
ditch	gubgub
divide	singpal
to do	uot
dog	gon
dolphin	udud
door	yam
dove, large black	baal
dove, white	but
down	gamney
dragonfly	ranwayway
to dream	wiw
to drink	lung
drum, hand	waag
dry	mamsas
dry	waam
duck	maluy
dust	kukow
ear	talngaa-
earth	tan
earthquake	sebananing
to eat food that is not meat	aang
to eat meat	gar

eel	wadiw
egg	batu
eight	dimad zizili tol
elbow	dima- gungguang
embers, hot	magarew
emotions, seat of	iloz
enemy	ager
everything	abang
excrement	tay
eye	malaa-
eyebrow	fagey
eyelash	bazbazey
face	no-
to fall down	mol
fan	pedipedi
far away	songgay
fat	lon
father (term of address)	mam
father (term of reference)	tam-
feather	bazi
female (animal)	pagar
fence	kawang
few	maley bad
to fight	dupuroy
to fill up	yes
fin, dorsal	ozizi
finger	gugor
finger, first	paida-
finger, little	zizili
fingernail	karfey
to finish	dag
finished	magarngeng
fire	yaaw
firewood	aay
first	bey
fish	yi
fish (sp.)	aziw
fish (sp.)	dieb
fish (sp.)	gilbaan
fish (sp.)	maam
fish (sp.)	paypay
fish basket	ter

fish net	amag
to fish with hook	mom
fish, sand	wayway dabi
five	dimad bad
flat	mataley
to float	faat
floor, wooden	fumfom
to fly	roy
a fly	guab
flying fox	malbong
fog	gabor
food (not meat)	anging
food of something	anangey
forehead	damo-
fork	si
four	waalbad
friend	wey
frog	far
fruit	batu
full	kafurbad
garden	um
garden, old	daleb
to gather	gab
to get	wab
to get (pl. object)	raw
gill	geleawey
ginger	ley
glass	lingen
to go	wal
to go away	rub
gong, small bamboo	kongkong
good	ningi
gourd for storing water	kaang
granddaughter	fufen
grandfather	fuf tamol
grandmother	fufen
grandson	fuf tamol
grass	kamsarsir
grass skirt	zer
grass for making brooms	gilaaz
grass, short	furfor
grass, tall	rey
grasshopper	guong
gravel	ururor
grease	giren
green	aay labni
ground	tan
to grow	pus
grub, beetle	magi
gums of mouth	gabaro-
hair of head	kataa-
hair, body	bubulu
half	angru
half	balbad
hand	dima-
handcrafts	kubol
happy	silsili
hawk, land	gingging
hawk, sea	bog
he, she, it	in
head	tabanaa-
to hear	luong
heavy	marwi
to help	zag
here, near speaker	nin
hey!	ey
hibiscus shrub	bininaar
to hide	wom
to hit	fung
hoe	salu
to hold one thing in hand	tuy
hole	lib
hook	awul
hornbill	saweng
hot	wanwaney
house	ab
how much	nimnem
husband	yu-
husk of coconut	funfun
I	nam
to ignite	babley
inland	kabaal

inside of	ilian
instrument marker	-wi
intestines	gamni-
island	mot
jaw	yaye-
to jump	duguaay
kangaroo, tree	dagebi
to kill	fung
knee	turu-
knife	silaay
knot	daging
to know	luong
knuckle	sigang
lake	raan kulot
later	murgam
to laugh	ziw
leaf	labni
to leave	rub
to leave behind	tes
leech	ul
left hand	zaay
leg	uye-
to lie down	yen
a light	babley
to light	babley
light in weight	sawlaley
lightning	kin
lime for betel	aw
lip	fari-
liver	irir
lizard	pariw
locational suffix	-an
loincloth	mal
long	malwey
to look	daang
louse	ut
lung	gawgaw
to make	fut
to make	not
to make a net bag	suy
man	tamol
mango	wayway
manioc	ayyang
many	leng
many, very	leng mat
mat	tab
meat	garung
meat	mizi
meat of something	anangey
middle	agum
millipede	bayariar
to miss the mark	sam
mist	gabor
moon	tabud
morning	bongsag
mosquito	nging
mother (term of address)	nin
mother (term of reference)	tin-
mountain	uyu
mouse	uyuy
mouth	awa-
nail	tuytuy
name	wawwaw
navel	biso-
near	singe- an
neck	agaru-
neck, back of	muzu- tuy
negative marker	tiaam
new	fow
night	udom
nine	dimad zizili waalbad
no, not	tiaam
nose	uyu-
nothing	balag
now	gamey
nut, edible	angaar
ocean	naas
octopus	urit
odor	girey
oil	giren
old (of persons)	fuf
old (of things)	matey

on top of	fangayan
one	daseg
one (indefinite)	bad
only	sag
opening	awa-
origin	fu
other side of, on the	teyan
outrigger	sam
outrigger boom	niad
outrigger, spikes to hold boom	dom
outside of	witan
over there, away from speaker and hearer	nog
a paddle	foy
to paddle	foy
pain	magagwaaw
palm of hand	ate- bibi
pandanus (sp.)	kimpaak
pandanus (sp.)	padaw
pandanus (sp.)	waday
papaya	paypay
path	zal
to peel	kam
picture	ananu-
pig	buor
pineapple	ananas
pit of fruit	dabi
to plait	pir
plane, carpenter	fang
to plant	abatut
plant with edible leaves	waas
plate	wod
post of house	giley
to pour out	yok
prawn	siw
to pull	ray
pumpkin	olu
to push	suk
to put	tey
python	masanggam

rafter	laaw
rain	aniaw
rat, bush	palaf
rattan	saner
really	sibi
red	darey
reef	burburar
reflection	lingen
relative on mother's side	tursi
to remain	badey
to remove coconut from shell	dog
ribs	raag
right hand side	wan
ripe	bimi
river	raan
road	zal
to roast	non
roof	fungung
roof, sago thatch	murot
roof, peak of	anangey
root of tree	warey
rotten	zamom
round	bililierngi
to rub	noy
rubber tree	saab
rubbish	mutmut
rudder	foy tini
to run	palul
to run away	rub
sago palm	bom
sago roof thatch	murot
sail	kiel
saliva	ge-
salt	timtimeng
saltwater	maas
sand	barmaam
sap	aay suru
sardine	paypay
saucepan	buaad
scales of fish	ziri
to scrape coconuts	naw
scratch	sanrer

to scratch	sak
sea	maas
seagull	kanay
seagull, big black	waganaanu
to search for	dangdang
to see	daang
seven	dimad zizili ru
to sew	sib
shade	yong
shadow	ananu-
shark	waray
shell	bazez
shell (sp.)	guam
shell (sp.)	mitmet
to shell a coconut	dog
shell of coconut	las
shell of nut used for decoration	Ngizngiz
shell of something	singi
shell, trochus	gargar
shin	damey
to shine	babley
to shoot with bow	pan
to shoot with spear	soy
shore	lang
short	midili
shoulder	dagdago-
to shout	waag
to shout	mugur
shrub used for decoration	kalmang
shrub used for decoration	nareng
sibling	tawaa-
sibling, elder	kak
sibling, younger	te-
sick	mayaay
to sit down	dos
six	dimad zizili bad
skin	kimpi-
skin	singi
skin	tini-

skull	las
sky	saam
to sleep	yen
slit gong	giram
small (pl.)	nalalu
small (sg.)	nalu
to smell	sami
smoke	os
snake	muat
snout of pig	singri
some	maley bad
soot	alal
a sore	munmun
soup	sur
to speak	kas
spear	tung
spear with wire prongs	tuytuy
spear, pronged	mayal
speech	bing
spikes to hold outrigger boom	dom
spirit	ananu-
spirit, bush	tan tuy
spirits of ancestors	ton
to spit	ge
to split with the grain	songpal
spoon	yes
squash	olu
stairs	tiet
to stand up	badi
to stand up	gun
star	buaay
to stay	badey
steam	ur
stick	aay dimi
stomach	kot
stone	matiaw
stones heated for cooking	wum
straight	basadangi
string	eb
string	yaw

strong	gagow
sugar cane	tow
sun	az
Sunday	abu
to swallow	ngot
to swell up	lal
to swim	uz
taboo	gaag
tail not of bird	ngingri
tail of bird	sipi
talk	bing
taro	maw
to tear	sis
to tell a story	kas
ten	dimad ru
termite	waf
that over there, away from speaker and hearer	nung
that, near hearer	nang
there, near hearer	nan
there, over there, away from speaker and hearer	nog
they	in
they two	intam
thigh	daglaa
thin	sabal baley
to think	kankan
this, near speaker	nin
thorn	sipi
three	tol
to throw	taaf
to throw away	bading
thumb	dima- tini
tide	ranraan
to tie	sag
to tie	taaw
to tighten	ray
tobacco	oa
toe	gugor
toenail	karfey
tomorrow	bongsag
tongue	bale-

tooth	ingo-
top, toy	ponggi
torch	sul
tree	aay
tree used for flooring, bows, mats	kilow
tree with edible fruit	ip
tree with edible fruit	raw
tree with edible leaves	yasung
tree with edible nut	angaar
tree with edible nut	tali
tree, callophyllum	wap
tree, leaves used as native paper	doy
tree, rubber	saab
trunk of tree	mugu
to turn	basul
to turn	tifiri
turtle, sea	fon
tusk, boar's	zong
two	ru
two (pronoun)	tam
underneath	paparuman
unripe	galmi
unripe (sg.)	kantey
unripe (pl.)	kantatey
to urinate	buz
urine	buz
vein	sinunuy
very	sibi
village	tet
vine	war
vine (sp.)	ow
vine used to poison fish	warmaan
to vomit	lu
to walk	par
wall	ger

war	duaan
to wash	dagor
water	raan
we excl.	nam
we incl.	yed
we two excl.	mantam
we two incl.	yedtam
to weave	pir
wet	bidbidi
what	samang
where	gan
when	nimanay
white (sg.)	kamtey
white (pl.)	kamtatey
white	sar
who	am
wild	goy
wind	yaang
wind from east	karag
wind from sea	yawarti
wind from west	dawdaw
wind, cold from mainland	der
windpipe	gusgus
wing	bazi
woman	pen
work	urat
worm	mutmuat
wrist	muzu-
yam	wil
yam (sp.)	bingat
year	daleb
yellow	yanyanang
yes	yow
yesterday	noran
you pl.	an
you sg.	un
you two	antam

Abelmoschus manihot	waas
Areca cathecu	zawwaw
Areca sp.	waal
Areca spp.	kilow
Artocarpus incisa	un
Calamus sp.	saner
Callophylum inophyllum	wap
Canarium polyphyllum	angaar
Carica papaya	paypay
Cocos nucifera	niw
Codiaeum variegatum	nareng
Colocasia sp.	maw
Dioscorea e culen	bingat
Dioscorea spp.	wil
Dracantomelon mangiferum	raw
Fikus elastica	saab
Gnetum gnemom	yasung
Hibiscus rosa-sinensis	bininaar
Hibiscus tileaceus	doy
Imperata arundinacea	rey
Inocarpus fagiferus	ip
Mangifera indica	wayway
Manihot utilissima	ayyang
Metroxylon sp.	bom
Pandanus sp.	kimpaak
Pandanus sp.	padaw
Pandanus sp.	waday
Piper betle	fungul
Taetsia fructicosa	kalmang
Terminalia catappa	tali

5. THE DEVELOPMENT OF BILIAU VOCABULARY FROM PROTO OCEANIC

In section 5.1 a list of Biliau words with their possible historical sources is given. This list was used as the original data for the study of sound changes, so that items were included in the list simply on the basis of phonetic similarity with a reconstructed form. Therefore, we are not claiming that every Biliau word is related to the reconstructed form given for it. In sections 5.2 and 5.3 the sound changes are presented. In section 5.4 the Biliau evidence which supports a distinction between POC *ns and *nj is presented. Some alternate POC reconstructions are suggested in the discussion. Section 5.5 compares the Biliau reflexes of POC consonant phonemes with reflexes in Gedaged as given by Lincoln (1973). Gedaged is the language most closely related to Biliau for which comparative work has been done (Dempwolff 1920; Milke 1961, 1965, 1968; Lincoln 1973). Both languages belong to the Siasi Family (Z'graggen 1975) and share about 50% cognates on the Swadesh 100-word list (rough check by the authors). In section 5.6 the Biliau words and their possible POC sources are again listed, this time in terms of the number of irregular reflexes they contain. This gives a rough measure of the likelihood that a Biliau word is indeed descended directly from the given POC form. In section 5.7 the evidence for some new PAN and POC forms is presented.

5.1 A list of Biliau words with their possible historical sources

In the following list, 150 Biliau words are given with their possible historical sources. The proto languages which are direct ancestors of Biliau are Proto Oceanic and Proto Austronesian. In cases where no Proto Oceanic or Proto Austronesian source form has been reconstructed, a form from another proto language is cited. Such a form is possibly related to the source form for the Biliau word. All reconstructions are taken from Wurm and Wilson's <u>English Finder List of Reconstructions in Austronesian Languages</u> (1975). Grace's (1969) Proto Oceanic finder list was also consulted.

The first column in the list gives a gloss for the Biliau word given in the second column. The reconstructed form is listed in the third column. The velar nasal (ŋ) in a proto form is always written as <u>ng</u>. When the proto form has a different gloss than the Biliau word, this gloss is given in single quotes following the proto form. Otherwise, the glosses are assumed to be the same. The following abbreviations are used to identify the reconstructed forms:

PAN	Proto Austronesian
PEO	Proto Eastern Oceanic
PML	Proto Malaitan (from Solomon Islands)
POC	Proto Oceanic
PPH	Proto Philippine
PPN	Proto Polynesian

arm, SEE hand			
bad	zamung	POC	nsaqat
base	fu	POC	puqu(n)
bathe, wash	sug	POC	suku, sugu
beak, SEE snout			
before	mug	POC	muqa 'to precede'
behind	miri-an	POC	mudi
-an is the locational suffix			
bell, slit gong	giram	PAN	giring
bird	maan	POC	manu(k)
bite, eat meat	gar	POC	kaRati
black	ngilngili	POC	ngkele
blood	asur	PAN	ZuRuq
body, skin	tini-	POC	tini
bone	tutu, tuy	POC	tu(dr)(i)
brain	kit	POC	quto(k)
breadfruit	un	POC	kulu(n)
breast	suy	POC	susu
brother (elder)	kak	POC	kaka 'sibling, elder'
burn	tung	POC	tunu
		PPH	tutung
bury	tan	POC	tanom 'plant, bury'
butterfly	kalbangbang	PAN	kalibangbang
canarium nut	angaar	POC	kangari
canoe	wag	POC	wangka
carry (in the hands)	zom	POC	sambat
chin, jaw	yaye-	POC	anse
coconut	niw	POC	niu(R)
cold	adangdangey	POC	ma(n)di(n)ding
cf. adiding from Galek and Suit. This is an example of the creeping a in Biliau, with underlying ding. Thus we compare ding and *nding.			
comb (verb)	sar	POC	saru
comb (noun)	sarey		
conch shell	tor	POC	tapuRi
cook (in saucepan)	nay	POC	nansu
(in fire)	non		
coral, branching	laaz	POC	lanje
cough	fu	PAN	batuk
	fufu	PPH	buhaq
		PML	fu'u
cry	taang	POC	tangi
cut	kop	POC	koso(p)
day after tomorrow, day before yesterday	warin-an	POC	waRi(ns)a
-an is the locational (temporal) suffix			

descend	sarir	POC	suru(p)
die	maat	POC	mate
dig	sar	POC	sara
dog	gon	POC	ngkaun
dove	but	POC	mpune
dry	mamsas	POC	ma-masa
dust	kukow	POC	kopu(t)
egg	batu	POC	ngpatu 'head, source'
ear	talngaa-	POC	talinga
earth, ground	tan	POC	tana(q)
eat (not meat)	aang	{POC	panga
food	anging	{POC	kani
elbow	gungguang	POC	sigun
everything	abang	PAN	apa
		PPN	afa
excrement	tay	POC	taqi
eye	malaa-	POC	mata
face	no-	POC	nako
fat, grease	lon	POC	mona(k)
feather, wing	bazi	POC	pan(i)
fill up	yes	POC	oso
fire	yaaw	POC	api
firewood, SEE tree			
father (form of address)	mam	PAN	mama
father (form of reference)	tam	POC	tama
finger, little	zizili	POC	ndi(n)si 'finger'
finger, toe	gugor	POC	kuku
fish	yi	POC	ika(n)
five, SEE hand			
fly (noun)	guab	PEO	ɣava
fly (verb)	roy	POC	Ropo
fog	gabor	POC	kampu(t) 'mist'
food, SEE eat			
forehead	damo-	POC	ndangma
four	waalbad	POC	pat
garden	um	POC	quma
gather	gab	POC	kampi(t)
ginger	ley	POC	lia
ground, SEE earth			
hair (=body hair)	bubulu	POC	pulu
hand, arm	dima-	POC	lima
five	dimad bad		
he, she, it, they	in	POC	ia '3rd person sing.'
hear, know	luong	POC	dongo
hit, kill	fung	POC	punu(q)
hoe	salu	POC	salu
hook	awul	POC	kawil

hole	lib	PAN	lubang
hot	wanwaney	POC	pana(s)
husk of coconut	funfun	PPH	bunut
island	mot	POC	motu
jaw, SEE chin			
kill, SEE hit			
knee	turu-	POC	turu
knife	silaay	POC	sele
know, SEE hear			
later	murgam	POC	mudi 'after'
lie down, SEE sleep			
lime chewed with betel	aw	POC	apu 'ashes'
		POC	apuR 'lime'
loincloth	mal	POC	malo
louse	ut	POC	kutu
man	tamol	POC	tamole
meat	mizi	POC	pinsiko, binsigo
mother (form of address)	nin	POC	tina
mother (form of reference)	tin		
mouth	awa-	POC	awang
navel	biso-	POC	mpuso(s)
neck	agaru	POC	Ruqa
new	fow	POC	paqoRu
		PPN	fou
night	udom	POC	(dr)odo
nose	uyu-	POC	usu u(n)su, see p 44
octopus	urit	POC	kuRita, uRita
one	daseg	PEO	ta(n)sa
		PPN	tasi
outrigger	sam	POC	nsama
paddle	foy	POC	ponse
pandanus (sp.)	padaw	POC	pada
path, road	zal	POC	njala(n)
pig	buor	POC	mpoRo
pigeon (large, black)	baal	PAN	balug' 'pigeon, dove'
pineapple	ananas	PPH	ananas
prawn	siw	PAN	Si(ng)pu(nN) 'shrimp'
		PPH	hipun 'shrimp'
rat	palaf	PAN	labav
red	darey	POC	daRa(q) 'blood'
right (hand)	wan	PAN	wanan
road, SEE path			
roof	fungung	PAN	bung
		PAN	bubung 'ridgepole'

root, SEE vine			
rope, SEE vine			
round	bililiwengi	POC	lili 'circle'
		PAN	bulat 'round'
run	palul	POC	puru
sap (of tree)	aay suru	PAN	ZuRuq 'blood, sap'
sea, saltwater	maas	POC	ma-asi(n)
seagull	kanay	POC	(ng)kana(k)e
shell of coconut, skull	las	POC	las(ae)
shore	lang	POC	lau(d)
sick	mayaay	POC	masaki(t) ma(n)saki, see p. 44
skin, SEE body			
skull, SEE shell of coconut			
sleep, lie down	yen	POC	eno 'lie down'
slit gong, SEE bell			
smell	sami	POC	sangit
snake	muat	POC	ngmata
worm	mutmuat		
snout (pig's), bird's beak	singri	PPH	sungaD
soup	sur	POC	suRu(q) 'broth'
stomach	kot	POC	kaqutu 'belly'
stone	matiaw	POC	patu
sugar cane	tow	POC	topu
sun	az	POC	qanso, qanjo
shoot	pan	POC	pana(q)
taro	maw	POC	ngmao
Terminalia	tali	POC	talinse
they, SEE he			
tie	sag	POC	saqit
tie	taaw	POC	takai
think	kankan	PPH	kuwan
three	tol	POC	tolu
toe, SEE finger			
torch	sul	POC	sulu
tree, firewood	aay	POC	kai 'tree, wood'
		POC	api 'fire'
trunk	mugu	POC	puqu(n)
turtle	fon	POC	ponu
two	ru	POC	dua
underneath	paparum-an	POC	papa 'under'
-<u>an</u> is locational suffix		?POC	Rungma 'house'
vine, rope	war	POC	waRo
root of tree	aay warey		

vomit	lu	POC	lua
wash, SEE bathe			
water	raan	POC	ndanu
		PCP	Ranu
we (exclusive)	mam	POC	kami
we (inclusive)	yed	POC	kinta
wind	yaang	POC	nsangi
wind (from sest)	dawdaw	PEO	sau(sau) 'wind'
wing, SEE feather			
woman	pen	POC	papine
worm, SEE snake			
yellow	yanyanang	POC	yango
yesterday	nor-an	POC	noRa
-an is locational (temporal) suffix			
you (singular)	un	POC	ko(e)

5.2 Biliau reflexes of Proto Oceanic phonemes

The sound changes by which the Biliau vocabulary has developed from its Proto Oceanic ancestor language are discussed in two parts. First, the Biliau reflexes of POC phonemes are discussed and illustrated. Second, the syllable structure adjustments are discussed. These adjustments account for the widespread development of closed syllables in Biliau while in POC they are rare. These two sets of changes are ordered with respect to one another; that is, the phoneme changes must precede the syllable structure changes. Within the two sets of changes there is no ordering. That the sets are ordered with respect to each other is illustrated by tay 'excrement' and tow 'sugar cane', for example. In the order of syllable structure adjustments followed by phoneme changes they would yield:

POC *taqi > *taq > *ta 'excrement'
POC *topu > *top > *to(p) 'sugar cane'

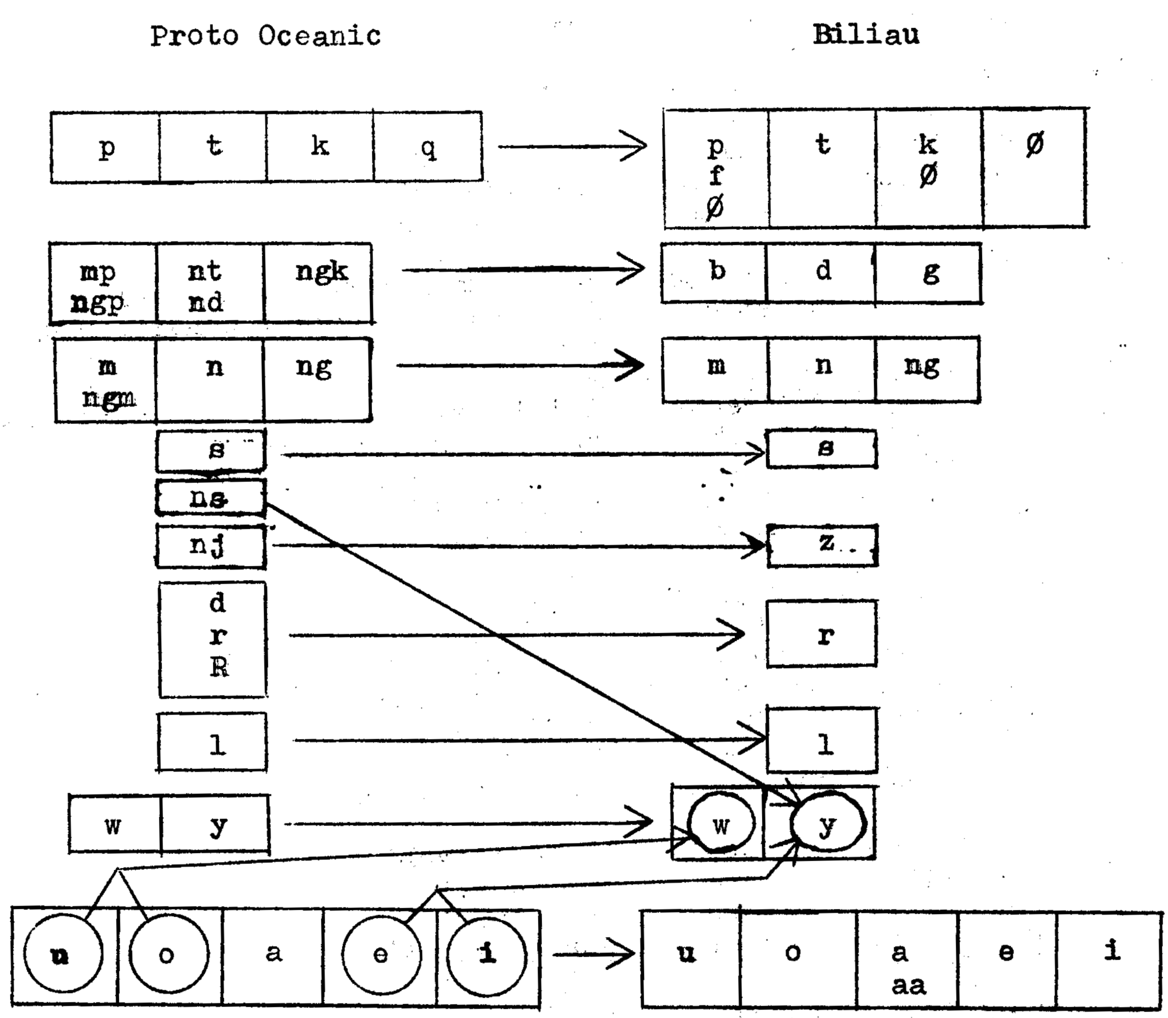
Whereas in the order of phoneme changes followed by syllable structure adjustments, the correct forms are derived.

POC *taqi > *tai > tay 'excrement'
POC *topu > *tou > tow 'sugar cane'

In all the examples given to illustrate the sound changes, the derivation of the Biliau form is given as a sequence of three forms. First the POC form is given. Then an intermediate form is given in which the POC phonemes are converted to their regular Biliau reflexes, but the syllable adjustments are not yet made. Finally the present day Biliau form is given. If

this form differs from what would be derived by applying the syllable structure adjustments to the intermediate form, the differences are marked with an underline. Thus an underline represents an irregular reflex.

The development of the Biliau system of phonemes from the phonemes of POC is diagrammed in the following chart. The arrows directed from POC phonemes to Biliau phonemes represent a reflex relationship. Where a series of phonemes is enclosed in a large rectangle, the arrow indicates that the whole series of Biliau phonemes. When a box on the Proto Oceanic side contains more than one proto phoneme, a merger is indicated. When a box on the Biliau side contains more than one phoneme, a split is indicated. The circles indicate splits and mergers involving individual phonemes from two different series.



We now give evidence for the reflexes of each of the POC phonemes in turn.

POC *p > p / intervocalically, preceding /a/
Ø / intervocalically, elsewhere

POC *topu	*tou	tow 'sugar cane'
POC *tapuRi	*tauri	tor 'conch shell'
POC *apu	*au	aw 'lime'
POC *papa	*papa	papa-ruman 'underneath'

POC *p > p or f / initially. /p/ appears to precede /a/ and /e/, while /f/ precedes /o/ and /u/, the rounded vowels. The same reflexes and conditioning factors for *p occur in Gedaged (see Lincoln 1973).

POC *pana	*pana	pan 'shoot'
POC *papine	*paine	pen 'woman'
POC *ponu	*fonu	fon 'sea turtle'
POC *puqu	*fuu	fu 'base'

POC *t > t / in all environments

POC *tini	*tini	tini- 'body'
POC *tana	*tana	tan 'earth'
POC *motu	*motu	mot 'island'

POC *k > k or Ø / in all environments. Both reflexes are well attested and there is no apparent conditioning.

POC *kopu	*kou	kow 'dust'
POC *kaqutu	*kautu	kot 'stomach'
POC *kaka	*kaka	kak 'elder brother'
POC *kutu	*utu	ut 'louse'
POC *kawil	*awil	awul 'hook'
POC *nako	*nao	no- 'face'

POC *q > Ø / in all environments

POC *quma	*uma	um 'garden'
POC *taqi	*tai	tay 'excrement'
POC *puqu	*fuu	fu 'base'

POC *mp > b / in all environments

POC *mpuso	*buso	biso- 'navel'
POC *mpune	*bune	but 'dove'
POC *mporo	*boro	buor 'pig'
POC *kampi	*kabi	gab 'gather'

POC *ngp > b / only one example

POC *ngpatu	*batu	batu 'egg', POC gloss is 'head, source'

POC *nt > d / The one possible attestation of this reflex is very tenuous. Further support is given by the pattern of the other nasal grade phonemes *mp, *nj, and *ngk, and the Gedaged reflex (Lincoln 1973).

POC *kinta	*ida	yed 'we inclusive'

POC *nd > d / in all environments

POC *nding	*ding	ding 'cold'
POC *ndangma	*dama	damo- 'forehead'

POC *ngk > g / in all environments

POC *wangka	*waga	wag 'canoe'
POC *ngkaun	*gaun	gon 'dog'

POC *m > m / in all environments

POC *motu	*motu	mot 'island'
POC *malo	*malo	mal 'loincloth'
POC *tama	*tama	tam 'father'

POC *ngm > m / in all environments

POC *ndangma	*dama	damo- 'forehead'
POC *ngmata	*mata	muat 'snake'
POC *ngmao	*mao	maw 'taro'

POC *n > n / in all environments

POC *niu	*niu	niw 'coconut'
POC *tini	*tini	tini- 'body'
POC *ponu	*fonu	fon 'sea turtle'

POC *ng > ng / in all environments

POC *tangi	*tangi	taang 'cry'
POC *talinga	*talinga	talngaa- 'ear'
POC *nding	*ding	ding 'cold'

POC *s > s / in all environments

POC *sara	*sara	sar 'dig'
POC *sulu	*sulu	sul 'torch'
POC *las	*las	las 'shell of coconut, skull'

POC *ns > y / in all environments

POC *ponse	*foye	foy 'paddle'	
POC *anse	*aye	yaye- 'chin, jaw'	
POC *nansu	*nayu	ñay 'cook in saucepan'	see section 5.4

POC *nj > z / in all environments

POC *lanje	*laze	laaz 'coral'
POC *qanjo	*azo	az 'sun'
POC *njala	*zala	zal 'path, road'

POC *d > r / in all environments

POC *mudi	*muri	mur-gam 'later'
POC *dua	*rua	ru 'two'
POC *mudi	*muri	miri-an 'behind'

POC *r > r / in all environments

POC *saru	*saru	sar 'comb'
POC *turu	*turu	turu- 'knee'
POC *mporo	*boro	buor 'pig'

POC *R > r / in all environments

POC *tapuRi	*tauri	tor 'conch shell'
POC *waRo	*waro	war 'vine'
POC *Ruqa	*rua	-ru- 'neck'

POC *l > l / in all environments

POC *malo	*malo	mal 'loincloth'
POC *las	*las	las 'shell of coconut, skull'
POC *lua	*lua	lu 'vomit'

POC *w > w / in all environments

POC *waRo	*waro	war 'vine'
POC *wangka	*waga	wag 'canoe'
POC *kawil	*awil	awul 'hook'

POC *y > y / The data contain only one instance of POC *y.

POC *yango	*yango	yanang 'yellow'

POC *i > i / in all environments

POC *tini	*tini	tini- 'body, skin'
POC *niu	*niu	niw 'coconut'

POC *e > e / in all environments

POC *anse	*aye	yaye- 'chin, jaw'
POC *eno	*eno	yen 'sleep'

POC *u > u / in all environments

POC *turu	*turu	turu- 'knee'
POC *quma	*uma	um 'garden'

POC *o > o / in all environments

POC *tolu	*tolu	tol 'three'
POC *mpuso	*buso	biso- 'navel'

POC *a > a or aa / in all environments. There is no apparent conditioning which explains the origin of the /aa/ phoneme. The fact that the double vowels occur in the other dialects of the Biliau language, but with no regular correspondence to the double vowels in Biliau village (see Simons 1977a) indicates that it is a recent innovation which has been applied in different ways by different villages rather than something that has been inherited through a regular process of sound change.

POC *saru	*saru	sar 'comb'
POC *lima	*lima	dima- 'hand'
POC *manu	*manu	maan 'bird'
POC *talinga	*talinga	talngaa- 'ear'

5.3 Syllable structure adjustments

The basic syllable shapes in POC are CV and V. The great majority of roots are of the form CVCV, eg. POC *tolu 'three', POC *lima 'hand'. Some consist of three CV syllables, eg. POC *tamole 'man', POC*kaqutu 'stomach'. In some cases, the initial

or final syllable is simply V, eg. POC *api 'tree', POC *ika 'fish', POC *dua 'two', POC *ngmao 'taro'. Rarely is a closed syllable reconstructed, and when it is, it is often with doubt, eg. POC *koso(p) 'cry', POC *manu(k) 'bird'.

In section 1.3 of this paper we noted that the syllable shapes which occur in Biliau are four: V, CV, VC, and CVC. The syllable structure adjustments account for the widespread development of closed syllables in Biliau, while in POC they are rare.

POC *V > Ø / CVC___CVC That is, a three syllable proto form which is suffixed to close the final syllable is reduced to two syllables of CVC shape by dropping the second vowel.

POC *talinga	*talinga-poss suf	talngaa- 'ear'
POC *mamasa	*mamasa-s	mamsas 'dry'
cf. PAN *kalibangbang		kalbangbang 'butterfly'
POC *mudi	*muri-gam	murgam 'later'

POC *V > Ø / VC___# That is, the word final vowel in a two or three syllable proto form is dropped. This process accounts for the great majority of CVC syllables in Biliau.

POC *wangka	*waga	wag 'canoe'
POC *kuRita	*urita	urit 'octopus'
POC *tapuRi	*tauri	tor 'conch shell'

This process of dropping the final vowel, coupled with the loss of an initial *k or *q results in many of the VC syllables.

POC *qanjo	*azo	az 'sun'
POC *kutu	*utu	ut 'louse'

When the stem final vowel is not word final, that is when a suffix follows it, it is not dropped.

POC *tini	*tini	tini- 'body, skin'
POC *mpuso	*buso	biso- 'navel'
POC *mudi	*muri-an	mirian 'behind'
		-an is the locational suffix

No CVVC or CVV syllables occur in Biliau. In the intermediate stage, after the phoneme changes, many VV sequences occur as a result of consonant loss (of POC *p, *k, or *q) or of a VV sequence in the original POC form. The following syllable shape adjustments reduce these VV sequences to single vowels to yield the syllable shapes of present day Biliau, CV and CVC. The final adjustment changes CVV sequences to CVC sequences, another origin of the Biliau CVC syllable.

*$V_1V_1 > V_1$ / That is, two identical consecutive vowels become one occurrence of that same vowel.

POC *puqu	*fuu	fu 'base'
POC *Ropo	*róo	roy 'fly'
POC *talinse	*taliye	tali 'Terminalia'

That is, *talinse > *taliye > *taliy (=*talii) > tali (word final vowel loss does not apply twice).

*CVVC > CVC / in all environments

*au, *ao > o

POC *tapuRi	*tauri	tor 'conch shell'
POC *ngkaun	*gaun	gon 'dog'
POC *kaqutu	*kautu	kot 'stomach'
POC *nako	*nao-	no- 'face'
POC *paqoRu	*faoru	fow 'new'

*ai > e

POC *papine	*paine	pen 'woman'

*$CV_1V_2 > CV_1$ / in word final position when V_2 is POC *a

POC *Ruqa	*rua	-ru- 'neck'
POC *lua	*lua	lu 'vomit'
POC *dua	*rua	ru 'two'

*$CV_1V_2 > CV_1C$ / in word final position when V_2 is POC *u, *o, *e, or *i. V_2 becomes a similar semivowel.

V_2 *o and *u > w

POC *apu	*au	aw 'lime'
POC *ngmao	*mao	maw 'taro'
POC *topu	*tou	tow 'sugar cane'
POC *kopu	*kou	kow 'dust'
POC *niu	*niu	niw 'coconut'

V_2 *e and *i > y

POC *taqi	*tai	tay 'excrement'
POC *kai	*ai	aay 'tree'
POC *kanae	*kanae	kanay 'seagull'
POC *tui	*tui	tuy 'bone'

5.4 Biliau evidence for POC *ns and *nj

The existence of POC *nj is not widely accepted by Oceanic scholars (note its omission in Pawley 1975 for instance). The Biliau data give possible evidence for a contrast between POC *ns and *nj. This is not very surprising, however, since *nj was first postulated by Milke partly on the basis of evidence from Gedaged, a closely related language (Milke 1965, Lincoln 1973:283).

It appears that POC *nj is reflected in Biliau as z and POC *ns is reflected as y. There are two clear examples of POC *nj:

POC *njala > zal 'road, path'
POC *lanje > laaz 'coral'

We also propose that the z of az 'sun' is derived from POC *nj. 'Sun' has been reconstructed as POC *qanso. Neither the Biliau form, az, nor the Gedaged form, ad (d is the regular reflex of POC *nj, Lincoln 1973), reflect *ns; rather they suggest *nj. The PAN form for 'sun' has been reconstructed with *nj by Dyen (*qanjaw), Blust (*qa(n)jaw), and Dempwolff (*qa(N)jaw) (Wurm and Wilson 1975:209). Thus we posit:

POC *qanjo > BIL az, GED ad 'sun'

There are a number of examples of POC *ns reflected as y in Biliau:

POC *nansu > nay 'cook'
POC *ponse > foy 'paddle'
POC *nsangi > yang 'wind'
POC *anse > yaye- 'chin, jaw'
POC *talinse > *taliy = tali 'Terminalia'

Two additional examples are possible. POC *usu 'nose' is relfected by Biliau uyu, where we would expect BIL *usu. *ns is tentatively reconstructed for PEO (*i(n)su), however, so we suggest that it be reconstructed for POC as well to explain the y in Biliau uyu. POC *masaki 'sick' is reflected by Biliau mayaay where *masaay would be expected. Again PEO has *ns (=*z, *mazåki) and we propose reconstructing *ns for POC. Thus,

POC *u(n)su > uyu- 'nose'
POC *ma(n)saki > mayaay 'sick'

The data contain four additional examples of POC *ns which appear to be counterexamples. The first can be explained as an alternation between oral and nasal grade. POC *nsama 'outrigger' is reflected in Biliau as sam which suggests a POC *sama. The evidence from other reconstructions suggests that the initial

consonant is involved in an oral-nasal grade alternation--PAN *t'a aman and *(n')t'aman, POC *sarima and *nsama, PPN *hama and *sama (reflect *sama and *nsama, respectively; see Harms 1973:299, Hockett 1973). Thus we propose,

POC *(n)sama > sam 'outrigger'

The three remaining examples of POC *ns show a reflex of z. Each of these examples, however, contains two additional irregularities, and they are thus very questionable.

?POC *pinsiko > mizi 'meat'
?POC *ndinsi > zizili 'little finger'
?POC *nsaqat > zamung 'bad'

Grace (1969:44) notes that Milke believed he had perhaps discovered the true nasal grade of POC *s in his *nj. The symmetry of the Biliau reflexes of POC suggests that this may be true. The Biliau reflexes of POC nasal grade phonemes are the voiced counterparts of the reflexes of the corresponding oral grade phonemes. That is,

	Proto Oceanic					Biliau reflexes			
Oral grade	*p	*t	*k	*s	>	p	t	k	s
Nasal grade	*mp	*nt	*ngk	*nj	>	b	d	g	z

5.5 Comparison of Biliau and Gedaged reflexes of POC consonant phonemes

Comparison of the Biliau reflexes of POC consonant phonemes in section 5.2 with the Gedaged reflexes given by Lincoln (1973: 284-285) shows a close relation between the two languages as expected. Their reflexes of *p, *mp, *ngp, *m, *ngm, *w, *t, *nt, *nd, *l, *n, *s, *k, *ngk, *ng, *q, and *y are identical; only *d, *r, *R, *nj and *ns are reflected differently. The differences are set out in the following table:

POC	Gedaged	Biliau
*R, *r, *d	z [l̥]	r
*nd, *nt	d	d
*nj	d	z
*ns	∅	y
*y	j [i]	y

The first row of the table represents a phonetic shift only; there is no difference in the resulting phonemic systems. That is, the reflex of POC *d, *r, and *R is pronounced in Gedaged as a voiceless lateral fricative while in Biliau it is pronounced as a voiced retroflexed flap. The next two rows show a difference in the resulting phonemic systems. In Gedaged there is a merger of *nd and *nt with *nj which are all reflected by d. In Biliau there is no merger; *nd and *nt are reflected by d which is distinct from z, the reflex of *nj. It should be noted here that in the three eastern villages of the Biliau language group (Yamai, Galek, and Suit) d and z have also merged and d reflects *nd, *nt, and *nj (Simons 1977a). The final two lines of the table show that Biliau has merged *ns and *y to y while Gedaged has dropped the *ns completely.

5.6 The Biliau words listed according to the number of irregular reflexes they contain

The number of irregular reflexes contained in a word gives a rough indication of how probable it is that the Biliau form is directly descended from the reconstructed POC form. Stated in another way, the fewer the number of irregular reflexes, the greater the probability that the word descended directly from the given POC form. An inspection of the lists in 5.6.2 and 5.6.3 of words containing irregular reflexes reveals a number of Biliau words which definitely seem to be derived from POC in spite of the irregularities. For instance, dima 'hand' from POC *lima should be *lima, luong 'hear' from POC *dongo should be *rong, and fung 'hit, kill' from POC *punu should be *fun. There are a number off possible explanations for these irregularities. The sound changes posited in section 5.2 could be wrong, or incomplete. The individual words as they developed may have been subject to sporadic change or borrowing. Another possibility is that these irregularities are common in other Oceanic languages, either as an areal characteristic or throughout Oceania in general. Further investigation of such cases could lead to the reconstruction of alternate POC forms with widespread distribution, or of forms confined to some subgroup of Oceania. It is hoped that the following lists may be useful data for this kind of research.

In sections 5.6.2 and 5.6.3 the form in parentheses is the form that would have derived from the given POC form by the sound changes posited in 5.2 and 5.3. The irregularities in the Biliau word are underlined. Square brackets enclose a portion of a Biliau word which is not compared. Items are listed by alphabetical order of the English gloss.

5.6.1 Biliau words containing no irregular reflexes

POC *puqu > fu 'base'
POC *manu > maan 'bird'
POC *tini > tini- 'body'
POC *tui > tuy 'bone'
POC *kaka > kak 'elder brother'
POC *kangari > angaar 'Canarium nut'
POC *wangka > wag 'canoe'
POC *niu > niw 'coconut'
POC *nding > ding, from adangdangi 'cold'
POC *saru > sar 'comb'
POC *tapuRi > tor 'conch shell'
POC *lanje > laaz 'coral'
POC *tangi > taang 'cry'
POC *nansu > nay 'cook'

POC *mate > maat 'die'
POC *sara > sar 'dig'
POC *ngkaun > gon 'dog'
POC *kopu > kow 'dust'
POC *talinga > talngaa- 'ear'
POC *tana > tan 'earth'
POC *taqi > tay 'excrement'
POC *nako > no- 'face'
POC *tama > tam 'father'
POC *quma > um 'garden'
POC *motu > mot 'island'
POC *turu > turu 'knee'
POC *mudi > mur-[gam] 'later'
POC *apu > aw 'lime'
POC *malo > mal 'loincloth'
POC *kutu > ut 'louse'
POC *tamole > tamol 'man'
POC *tina > tin 'mother'
POC *Ruqa > [aga]-ru- 'neck'
POC *u(n)su > uyu- 'nose'
POC *kuRita > urit 'octopus'
POC *(n)sama > sam 'outrigger'
POC *ponse > foy 'paddle'
POC *njala > zal 'path, road'
POC *lili > [bi]-lili-[wengi] 'round'
POC *ma-asi > maas 'sea, saltwater'
POC *kanae > kanay 'seagull'
POC *las > las 'shell of coconut, skull'
POC *ma(n)saki > mayaay 'sick'
POC *suRu > sur 'soup, broth'
POC *kaqutu > kot 'stomach'
POC *topu > tow 'sugar cane'
POC *qanjo > az 'sun'
POC *pana > pan 'shoot'
POC *ngmao > maw 'taro'
POC *talinse > tali 'Terminalia'
POC *tolu > tol 'three'
POC *sulu > sul 'torch'
POC *kai > aay 'tree, firewood'
POC *api > aay 'tree, firewood'
POC *ponu > fon 'turtle'
POC *dua > ru 'two'
POC *papa > papa-[rum-an] 'underneath'
POC *Rungma 'house' > [papa]-rum-[an] 'underneath
POC *waRo > war 'vine'
POC *lua > lu 'vomit'
POC *nsangi > yang 'wind'
POC *papine > pen 'woman'
POC *noRa > nor-[an] 'yesterday'

5.6.2 Biliau words containing one irregular reflex

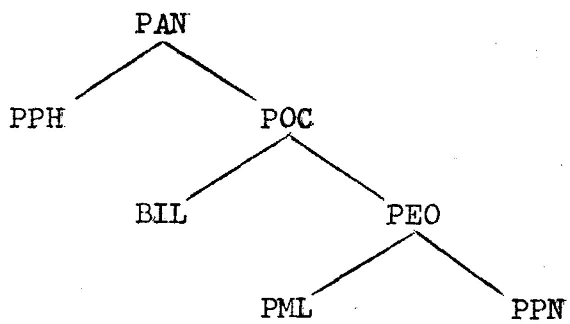
POC *suku > (*suk) sug 'bathe'
POC *muqa > (*mu) mug 'before'
POC *mudi > (*muri) miri- an 'behind'
POC *kulu > (*ul) un 'breadfruit'
POC *su[su] > (*su) suy 'breast'
POC *tunu > (*tun) tung 'burn'
POC *tanom > (*tanom) tan 'bury'
POC *anse > (*aye-) yaye- 'chin, jaw'
POC *kosop > (*kosop) kop 'cut'
POC *waRinsa > (*wari) warin- an 'day before yesterday'
POC *mpune > (*bun) but 'dove'
POC *mamasa > (*mamas) mamsas 'dry'
POC *panga > (*pang) aang 'eat'
POC *kani > (*an) aang 'eat'
POC *mata > (*mata-) malaa- 'eye'
POC *mona > (*mon) lon 'fat, grease'
POC *ika > (*i) yi 'fish'
POC *Ropo > (*ro) roy 'fly'
POC *ndangma > (*dama-) damo- 'forehead'
POC *kampi > (*kab) gab 'gather'
POC *lima > (*lima-) dima- 'hand'
POC *ia > (*i) in 'he, she, it, they)
POC *punu > (*fun) fung 'hit, kill'
POC *salu > (*sal) salu 'hoe'
POC *kawil > (*awil) awul 'hook'
POC *pana > (*pan) wanwaney 'hot'
POC *awang > (*awang) awa- 'mouth'
POC *mpuso > (*buso-) biso- 'navel'
POC *paqoRu > (*for) fow 'new'
POC *mpoRo > (*bor) buor 'pig'
POC *lau > (*law) lang 'shore'
POC *eno > (*en) yen 'sleep'
POC *ngmata > (*mat) muat 'snake'
POC *takai > (*tay) taaw 'tie'
POC *ndanu > (*dan) raan 'water'
POC *kami > (*am) mam 'we exclusive'
POC *yango > (*yang) yanyanang 'yellow'

5.6.3 Biliau words containing two or more irregular reflexes

POC *nsaqat > (*yat) za[mung] 'bad'
POC *kaRati > (*karat) gar 'bite, eat meat'
POC *ngkele > (*gel) ngilngili 'black'
POC *quto > (*ut) kit 'brain'
POC *sambat > (*sabat) zom 'carry'
POC *suru > (*sur) sarir 'descend'
POC *sigun > (*sigun) gungguang 'elbow'
POC *pani > (*pani-) bazi 'feather, wing'
POC *oso > (*os) yes 'fill up'
POC *api > (*ay) yaaw 'fire'
POC *ndinsi > (*diyi) zizili 'little finger'
POC *kuku > (*kuk) gugor 'finger'
POC *kampu > (*kab) gabor 'fog'
POC *pat > (*pat) waal[bad] 'four'
POC *lia > (*li) ley 'ginger'
POC *pulu > (*ful) bubulu 'body hair'
POC *dongo > (*rong) luong 'hear, know'
POC *sele > (*sel) silaay 'knife'
POC *pinsiko > (*piyik) mizi 'meat'
POC *odo > (*or) udom 'night'
POC *pada > (*par) padaw 'pandanus sp.'
POC *daRa > (*rar) darey 'red'
POC *puru > (*fur) palul 'run'
POC *saqit > (*set) sag 'tie'
POC *puqu > (* u) mugu 'trunk'
POC *kinta > (*id) yed 'we inclusive'
POC *ko > (*o) un 'you singular'

5.7 Evidence for new Proto Austronesian and Proto Oceanic forms

In the list of possible historical sources, Biliau words were listed for which no similar POC form has been reconstructed but which show similarity to a form that has been reconstructed elsewhere in Austronesia. These give evidence for POC forms that have not yet been reconstructed. Examples are cited from Proto Austronesian (PAN), Proto Philippine (PPH), Proto Eastern Oceanic (PEO), Proto Malaitan (PML), and Proto Polynesian (PPN). In terms of a family tree diagram, these are related to POC, Biliau (BIL), and to one another as follows.



From this diagram it can be seen that a Biliau word which is similar to a PEO, PML, or PPN form gives evidence for a new POC form. A Biliau word that is similar to a PAN form also gives evidence for a new POC form. Finally, a Biliau word which is similar to a PPH form gives evidence for a new PAN form and a new POC form.

Some of the Biliau words directly reflect the PAN form via regular POC reflexes of PAN phonemes (from Pawley 1975) and regular Biliau reflexes of POC phonemes. In these cases, the shape of a POC form can be posited as the regular reflex of PAN. The POC phoneme for a correspondence between PAN *b and BIL b is given as *(m)p. PAN *b should yield POC *p, but BIL b should be a reflex of POC *mp.

POC *suRu(q) 'blood, sap'

> from PAN *ZuRuq, evidenced by BIL asur 'blood' and BIL aay suru 'sap of tree'. POC *suRu(q) has already been reconstructed by Milke with the glosses 'fluid, liquid, flood, wet, coconut milk, boil, broth'. Here the two glosses 'blood' and 'sap' are added.

POC *kali(m)pang(m)pang 'butterfly'

> from PAN *kalibangbang, evidenced by BIL kalbangbang.

POC *mama 'father'

from PAN *mama, evidenced by BIL mam.

POC *punu, PAN *bunut 'husk of coconut'

evidenced by PPH *bunut and BIL funfun.

POC *(m)palu 'pigeon, dove'

from PAN *balug', evidenced by BIL baal.

POC *sipu 'shrimp, prawn'

from PAN *Sipu, evidenced by BIL siw.

POC *wana 'right (hand)'

from PAN *wanan, evidenced by BIL wan.

POC *pung 'roof'

from PAN *bung, evidenced by BIL fungung.

Other pairs of forms which offer possible evidence for new POC and PAN forms are given below. Here the evidence is not sufficient to posit the shape of a POC or PAN form, or even its sure existence, so only the supporting forms are given.

BELL, SLIT GONG - PAN *giring, BIL giram

BURN - PPH *tutung, BIL tung (cf. POC *tunu)

COUGH - PPH *buhaq, PML *fu'u, BIL fu

EVERYTHING - PAN *apa, PPN *afa, BIL abang

FLY (n.) - PEO *ɣava, BIL guab

HOLE - PAN *lubang, BIL lib

ONE - PEO *tasa, PPN *tasi, BIL daseg

PINEAPPLE - PPH *ananas, BIL ananas (It is not clear whether this word is directly inherited or borrowed through German Ananas.)

RAT - PAN *labav, BIL palaf

SNOUT, BEAK - PPH *sungaD, BIL singri

THINK - PPH *kuwan, BIL kankan

WIND - PEO *sau(sau), BIL dawdaw 'wind from west'

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